



National Aeronautics and Space Administration

Professional Development, Instructional Materials and Technology Tools in Support of NASA Explorer Schools

FY 2004 NASA Research Announcement

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I. FUNDING OPPORTUNITY DESCRIPTION

(a) NASA Vision

To improve life here,
To extend life to there,
To find life beyond.

(b) NASA Mission

To understand and protect our home planet
To explore the Universe and search for life
To inspire the next generation of explorers
...as only NASA can.

(c) NASA Office of Education Strategy

The NASA Office of Education provides students and educators with unique teaching and learning experiences "as only NASA can." With guidance from NASA, industry and university engineers and scientists, students and educators will study the Earth, explore the universe and planets using current data, and conduct scientific experiments using the latest aerospace and space-based research methods. Among its objectives, the Office of Education strives to:

- Increase the number of elementary and secondary students and teachers who are involved in NASA-related education opportunities.
- Support higher education research capability and opportunities that attract and prepare increasing numbers of students and faculty for NASA-related careers.
- Increase the number and diversity of students, teachers, faculty, and researchers from underrepresented and underserved communities in NASA-related science, technology, engineering, and mathematics (STEM) fields.
- Expand students, teacher, and public access to NASA education resources via the establishment of e-Education as a principal learning support system.

Through these objectives, the Office of Education will inspire and motivate students, and engage the public ...as only NASA can.

(d) NASA Explorer Schools (NES) Program

The NES Program advances the Agency's goal to inspire the next generation of explorers and to motivate students to pursue STEM careers. The NES Program supports the NASA Office of Education strategy by integrating new components with existing assets within the Agency into a structure that facilitates local

education efforts. Three-year partnerships with select schools serving grades 4 – 9 are nurtured by the NES Program, affording unprecedented learning opportunities to educators, students and families. By coordinating interaction with NASA scientists, engineers and educators, the NES Program is increasing student participation in NASA educational and enrichment activities.

The NES Program directly addresses Office of Education objectives by increasing the number of elementary and secondary educators effectively utilizing NASA content-based STEM materials and programs in the classroom, and by increasing family involvement in NASA-sponsored programs. An important component of NES Program support for the Office of Enterprise strategy is alignment of NES-supported activities with state or local STEM education objectives.

Professional development opportunities for teachers and school administrators develop the skills necessary to assist students in learning science, technology, engineering and mathematics content. Past funding has provided curriculum integration training, training and support of Personal Digital Assistant use in the classroom, and the development of an online template for student investigations in research, problem solving, and design challenges relating to NASA's missions. Collaborative efforts with other federal or professional organizations are encouraged to leverage expertise and programs.

One approach to increasing teacher, student, family and public access to NASA education resources that is identified in the Office of Enterprise strategy is the establishment of e-Education as a principal learning support system. To promote this goal, the NES Program will identify and implement advanced information technology applications that will positively impact learning, particularly in the area of mathematics.

For more information about NASA Explorer Schools, see <http://explorerschools.nasa.gov>.

(e) Scope of Effort

The NES Program is soliciting proposals to provide professional development opportunities, instructional materials, and/or technology tools for administrators, teachers, and/or students and their families from NASA Explorer Schools.

(i) Professional Development

The NES Program seeks proposals to provide sustained professional development opportunities for administrators and teachers from NASA Explorer Schools. Such opportunities could include training grounded in researched-based methods to improve teaching practices including, but not limited to, assessment techniques, classroom management, classroom safety, curriculum design and integration, effective concept development, and correction of common misconceptions.

An additional area of professional development could address technology skills in areas including, but not limited to, information technologies, communications technologies, remote sensing technologies, earth and space science observational technologies, data interpretation and manipulation technologies, and other technologies relevant to NASA or participation in the NES Program. Such professional development opportunities could be delivered in situ and/or using remote communications solutions. Proposals for professional development activities must include a set of metrics to be used as indicators of the degree of success of the activity.

If selected, representatives from projects that focus on introducing teachers to inquiry-based activities should be prepared to complete the Virtual Design Center online training in research-based design principles for inquiry-based classroom activities provided by NASA-supported Classroom of the Future. (See <http://vdc.cet.edu/> for a description of the training.)

(ii) Instructional Materials

The NES Program seeks proposals for the design and development of instructional materials, which bring NASA Enterprise-related content into the classroom for use in NASA Explorer Schools. Activities targeting improving mathematics skills in NASA Enterprise-related science, technology and engineering content are encouraged. Proposed activities must have a firm basis in National Educational Standards (i.e. a simple list of standards that may be related to the activity will not suffice). Proposals for instructional materials must include plans to measure improvement in student learning in relevant areas.

If selected, the principal investigator and/or members of the project team designated by the principal investigator should be prepared to complete the Virtual Design Center online training in research-based design principles for inquiry-based classroom activities provided by NASA Classroom of the Future. (See <http://vdc.cet.edu/> for a description of the training.)

(iii) Technology Tools

The NES Program seeks to establish a technology infrastructure that meets citizen demand for NASA learning services and to identify and implement new advanced technology applications that will positively impact learning. This Announcement seeks proposals for the design and development of technology tools and applications that support inquiry-based learning in science, technology, engineering, and mathematics in NASA Explorer Schools. These tools and applications could comprise part or all of an instructional package or could be generic components to enhance learning or for engaging and effective delivery of instruction. The development of

assistive technology applications for students with special needs is encouraged. Proposals for technology tools and applications must include a list of targeted outcomes to be used as indicators of successful implementation.

If selected, the principal investigator and/or members of the project team designated by the principal investigator should be prepared to complete at least the first four sessions of the Virtual Design Center online training in research-based design principles for inquiry-based classroom activities provided by NASA Classroom of the Future. (See <http://vdc.cet.edu/> for a description of the training.)

(f) NASA Safety Policy

NASA's safety priority is to protect: (1) the public, (2) astronauts and pilots, (3) the NASA workforce (including contractor employees working on NASA contracts), and (4) high-value equipment and property.

(g) Availability of Funds for Awards

Funds are not currently available for awards under this announcement. The Government's obligation to make award(s) is contingent upon the availability of appropriated funds from which payment can be made and the receipt of proposals that NASA determines are acceptable for award under this announcement.

II. AWARD INFORMATION

(a) Award Type

Awards made through this NASA Research Announcement (Announcement) will be in the form of grants. Information about NASA's policies concerning grants and cooperative agreements can be found in the *NASA Grants and Cooperative Agreement Handbook* (hereafter referred to as the *Handbook*) at <http://ec.msfc.nasa.gov/hq/library/srba/>.

(b) Period of Performance

The period of performance for the grants resulting from this solicitation will last up to twenty-four (24) months. The anticipated start date for these awards is December 2004.

(c) Number and Value of Awards

NASA expects to award up to eight (8) grants under this Announcement. The estimated annual value for each individual award is \$100-250 K depending on the effort proposed. Proposals that supplement existing projects are eligible to compete with proposals for new awards.

(d) Schedule for Awards

Release Date:	October 18, 2004
Notices of Intent Due:	October 29, 2004
Proposals Due:	December 3, 2004
Selection Announcement:	December 2004

III. ELIGIBILITY INFORMATION

(a) Eligible Applicants

Participation in this program is open to all categories of U.S. organizations, including educational institutions, industry, nonprofit institutions, as well as NASA Centers and other U.S. Government agencies. Historically Black Colleges and Universities (HBCU's), other minority educational institutions, and small businesses and organizations owned and controlled by socially and economically disadvantaged individuals or women are particularly encouraged to apply. There is no restriction on the number of proposals that an organization may submit to this solicitation, or on the teaming arrangements for any one proposal, including teaming with employees of NASA's Centers, and the Jet Propulsion Laboratory.

(b) Cost Sharing or Matching

If an institution of higher education or other nonprofit organization wants to receive a grant, cost sharing is not required. However, NASA can accept cost sharing if it is voluntarily offered. See the *Handbook*, Section B, Provision 1260.123, "Cost sharing or matching," which describes the acceptable forms of cost sharing. If a commercial organization wants to receive a grant or cooperative agreement, cost sharing is required unless the commercial organization can demonstrate that they will not receive substantial compensating benefits for performance of the work. If no substantial compensating benefits will be received, then cost sharing is not required but can be accepted. See Section D, Provision 1274.204, "Costs and Payments," of the *Handbook*.

IV. APPLICATION AND SUBMISSION INFORMATION

(a) Address to Request Proposal Package

All information needed to apply to this solicitation is contained in this announcement. The *NASA Guidebook for Proposers Responding to a NASA Research Announcement – 2004 (NASA Guidebook for Proposers)*, located at URL <http://www.hq.nasa.gov/office/procurement/nraguidebook/>, is a very useful reference that relates to many aspects of this Announcement. Note that both the introductory material and appendices of the *NASA Guidebook for Proposers* provide additional information about the entire NASA solicitation process, including NASA policies for the solicitation of proposals, guidelines for writing

complete and effective proposals, and NASA's general policies and procedures for the review and selection of proposals, as well as for issuing and managing the awards to the institutions that submitted selected proposals. The *NASA Guidebook for Proposers* also contains a group of *Frequently Asked Questions* (FAQs) that provide additional miscellaneous information about the NASA proposal and award processes and procedures.

Solicitation Availability:

Go to <http://research.hq.nasa.gov>

Click on Office of Education (Code N)

Information about the Virtual Design Center will be provided via webcast to potential applicants by the Center for Educational Technologies. Session is scheduled for Tuesday, October 26, 2004, 4:00 –5:50 PM EDT, URL: <http://vdc.cet.edu/>.

(b) Proposal Submission Dates, Times and Locations

Regardless of the method of delivery, the signed original proposal, five printed copies, and the electronic copy of the entire submission must be physically received by 4:30 PM Eastern time on December 3, 2004. The address for the delivery of proposals is:

NASA Peer Review Services

Attn: Althia Harris

NASA Explorers Schools NRA # NNH04ZNS003N

500 E St., SW, Suite 200

Washington, DC 20024

In accordance with NASA FAR Supplement 1815.208, proposals or proposal modifications received from qualified firms after the latest date specified for receipt may be considered if a significant reduction in cost to the Government is probable or if there are significant technical advantages, as compared with proposals previously received. In such cases, the project office shall investigate the circumstances surrounding the late submission, evaluate its content, and submit written recommendations and findings to the selection official or a designee as to whether there is an advantage to the Government in considering it. The selection official or a designee shall determine whether to consider the late submission.

If a late proposal is returned, it is entirely at the discretion of the proposer to decide whether or not to submit it in response to a subsequent, appropriate solicitation.

(c) Content and Form of Proposal Submission

Proposers are instructed to submit one original proposal with signatures from both the Principal Investigator and the Authorizing Official for the entity proposing. An Authorizing Official is considered to be an official that can obligate resources

for that entity. It is through the Authorizing Official that the award will be made. The copies of the proposal should be double sided and bound with a binder clip or staple. An electronic copy should also be submitted with the hard copy proposals. It is preferred that the electronic copy be on a CD ROM or on a 100MB Zip disk. It is acceptable to submit the electronic copy on 3.5-inch floppy discs; however, these discs are easily damaged during shipping. The file or files should be in MS Word (.doc), MS Excel (.xls), or Adobe Acrobat (.pdf) format.

(i) NASA Proposal Data System

This NRA requires that the proposer register key data concerning their intended submission with NASA's master proposal data base system located at the Web site <http://research.hq.nasa.gov>. Therefore, potential applicants are urged to access this site well in advance of the proposal due date(s) of interest (see further below) and familiarize themselves with its structure. It is especially important to note that every individual named on the proposal's *Cover Page* (see further below) must be registered in this NASA proposal data system. Individuals must perform this registration themselves, i.e., no one may register a second party. Note that the data entered into this data site are strictly for NASA's use only.

Requests for assistance in accessing and/or using this Web site may be directed by E-mail to <proposals@hq.nasa.gov>, Monday through Friday, 8:00 AM – 6:00 PM Eastern Time, or by telephone to (202) 479-9376. Frequently Asked Questions (FAQs) may be accessed through the Proposal Online Help site at <http://proposals.hq.nasa.gov/help.html>.

(ii) Notice of Intent to Propose

In order to plan for a timely and efficient peer review process submission of a Notice of Intent to Propose (NOI) is strongly encouraged. The NOI should be received by October 29, 2004. Appendix A provides directions for submission of the NOI.

A separate NOI must be submitted for each intended proposal. Note that this NOI may also be the preliminary version of the proposal *Cover Page/Proposal Summary*; if so, the Web site provides the user future access to update this information for the final *Cover Page/Proposal Summary* as the deadline for submission of the final proposal approaches.

(iii) Proposal Cover Page

All proposals submitted in response to this NRA must be prefaced with the *Proposal Cover Page* form that can be accessed at <http://research.hq.nasa.gov> (reference sample form in Appendix B). This form may be accessed and submitted starting ~90 days in advance of the proposal due dates given in Section II, Paragraph (d) above and remains open until midnight Eastern Time on the due date.

The Proposal Cover page must first be submitted **electronically** via the SYS-EYFUS Web site located at <http://proposals.hq.nasa.gov/>. If the respondent has submitted an electronic Notice of Intent (Appendix A) to SYS-EYFUS, the same user UserID and password can be used to complete the electronic proposal cover page. If the respondent obtained a User ID and password in the process of submitting a proposal for a previous research opportunity announcement, the same user UserID and password can be used to complete the electronic proposal cover page in response to this research opportunity announcement. Be sure to click on "Edit Personal Information" if any of your correspondence information in SYS-EYFUS is not current.

After the requested Proposal Cover Page data are electronically entered and submitted, the entirety of this form is to be printed and then signed by the designated personnel for submission with the required hard copies of the proposal. No other formal forms are required for proposal submission. See the *NASA Guidebook for Proposers*, Chapter 2, for further details.

The Proposal Cover Page **hard copy** (see below for instructions on how to acquire the proposal hard copy from the online system) must be signed by the Principal Investigator and an official by title of the investigator's organization who is authorized to commit the organization. The authorizing organizational signature also serves to verify that the proposing organization has read and is in compliance with all Federally required Representations and Certifications (Appendix C). This page, containing Principal Investigator, Team, and Authorizing Official information, a 200-300 word abstract, and a summary of proposed costs, will count as one page toward the proposal total regardless of actual length. See Appendix D for a Proposal Checklist.

SYS-EYFUS automatically assigns a unique proposal identifier code to each entry, e.g., "LWSGD02-0004-0003," that will appear in a double-framed box in the upper right corner of the printed Proposal Cover Page; this number is used by NASA throughout the proposal review and selection process to uniquely identify the proposal and its associated electronic data.

Electronic submission of only the Proposal Cover Page does not satisfy the deadline for proposal submission. Five copies of the proposal, one copy with original signatures, and the electronic version of the entire proposal must be received at the indicated address by close of business (4:30 p.m. Eastern Time) on the proposal due date (reference paragraph (c) below).

Physical changes (such as whiteout or strikethrough) of any kind to the printed version of a Proposal Cover Page that has been electronically submitted are not permitted. Any needed changes may only be made by

editing the electronic version following the instructions on the Web site, after which the revised Proposal Cover Page is then printed for purposes of securing the necessary signatures (Note: for this reason, it is recommended that this item be produced from the specified Web site well in advance of the proposal due date).

(iv) Proposal Format and Contents

The proposal shall not exceed thirty (30) pages. The proposal must be submitted on standard 8 ½ x 11 paper, single spaced, with margins no less than one inch on each side and bound with a binder clip or staple. If foldouts are included, they must be folded to page size with each leaf (or portion) counting as a single page. The font size may be no smaller than 12 point. When short textual annotations are included in graphics, figures, tables and exhibits and the physical position of the annotation is important for understanding, a type size of 9-point font is acceptable. It is not acceptable to use 9-point font for long textual passages even though they may appear in exhibits. Appendix D, Proposal Checklist, provides a general guide highlighting the information to be included in each proposal.

- **Table of Contents**

The one-page Table of Contents should provide a guide to the organization and contents of the proposal. This item may also incorporate customized formats of the proposer's own choosing, e.g., identification of the submitting organization through use of letterhead stationary, project logos, etc.

- **Summary of Proposal Personnel and Work Efforts**

The item must provide a summary list, using a tabular format of the proposer's own choosing, of the names and intended work commitments (in units of a percentage of a nominal full time Work Year of 1,840 hours) of the PI and of every Co-I in the proposed investigation for whom salary support is requested for each year of the proposed period of performance.

- **Technical / Management Plan**

As the main body of the proposal, this section must cover the following topics in the order given, all within the 30 page limit:

- The objectives and expected significance of the proposed research, especially as related to the objectives given in the Announcement;
- The technical approach and methodology to be employed in fulfilling the proposed Announcement, as well as any special

facilities of the proposing organization(s) and/or capabilities of the proposer(s) that would be used for carrying out the work;

- The relevance of the proposed work to past, present, and/or future NASA programs and interests or to the specific objectives given in the Announcement;
- A general plan of work, including anticipated key milestones for accomplishments, the management structure for the proposal personnel, any substantial collaboration(s) and/or use of consultant(s) that is (are) proposed to complete the proposers ability to fulfill the Announcement; and a description of the expected contribution to the proposed effort by the PI and each Collaborator, Co-Investigator, etc. regardless of whether or not they derive support from the proposed budget.
- The *Technical/Management Section* may contain illustrations and figures that amplify and demonstrate key points of the proposal (including milestone schedules, as appropriate). However, they must be of an easily-viewed size, and have self-contained captions that do not contain critical information not provided elsewhere in the proposal.

- **References and Citations**

All references and citations given in the *Technical/Management Section* must be provided using easily understood, standard abbreviations for journals and complete names for books. It is highly preferred but not required that these references include the full title of the cited paper or report.

- **Personnel Resumes**

The Principal Investigator must include curriculum vitae (not to exceed three pages) that include his/her professional experiences and positions and a bibliography of recent (past 5 years) publications, especially those relevant to the proposed investigation. An one-page vitae for each Co-Investigator must also be included.

- **Past Performance**

This section of the proposal should list and explain any similar work previously performed by the proposer or members of the proposer's team for the past 5 years. Offerors shall discuss experience and past performance which would especially qualify the offerors and any proposed sub Awardees to perform the work set forth in the Statement of Work. Offerors shall elaborate on the scope, magnitude, and

complexity of prior and on-going experience, similar to the stated requirement, over the past three years and demonstrate its comparability to the RFP. Applicable contact numbers, contracting agencies, and the address and phone numbers of contracting and technical officers are to be provided.

Budget Explanation / Plan

Reference Appendix G, Budget Narrative, for the detailed budget explanation/plan format required for submission with your proposal.

(i) Proposals should contain cost and technical parts in one volume: do not use separate "confidential" salary pages. As applicable, include separate cost estimates for salaries and wages; fringe benefits; equipment; expendable materials and supplies; services; domestic and foreign travel; ADP expenses; publication or page charges; consultants; subcontracts; other miscellaneous identifiable direct costs; and indirect costs. List salaries and wages in appropriate organizational categories. Estimate all staffing data in terms of staff-months or fractions of full-time.

(ii) Explanatory notes should accompany the cost proposal to provide identification and estimated cost of major capital equipment items to be acquired; purpose and estimated number and lengths of trips planned; basis for indirect cost computation (including date of most recent negotiation and cognizant agency); and clarification of other items in the cost proposal that are not self-evident. List estimated expenses as yearly requirements by major work phases.

(iii) Allowable costs are governed by FAR Part 31 and the NASA FAR Supplement Part 1831 (and OMB Circulars A21 for educational institutions and A-122 for nonprofit organizations).

(iv) Use of NASA funds--NASA funding may not be used for foreign research efforts at any level, whether as a collaborator or a subcontract. The direct purchase of supplies and/or services, which do not constitute research, from non-U.S. sources by U.S. award recipients is permitted.

- **Current and Pending Support**

Information must be provided for all ongoing and pending projects and proposals that involve the proposing PI. Information citing ongoing projects should also be reflected in Appendix E. This information is also requested, but not required for any Co-Is who are proposed to perform a significant share (>10 percent) of the proposed work. This information must be provided for each such individual for each of the

following two categories of awards that may exist at the time of the proposal submission deadline, namely,

- Current Awards (for any of the period that overlaps with the submitted proposal), and
- Pending Proposals and Awards (including the proposal being submitted to NASA).

For each of these two categories, and using a format of the proposer's own choosing, provide the following information:

- Title of award or project title;
- Program name (if appropriate) and sponsoring agency or organization, including a point of contact with his/her telephone number and E-mail address;
- Performance period and total budget; and
- Commitment by PI (or Co-I) in terms of a fraction of a full time Work Year.

For pending proposals involving substantially the same kind of effort as that being proposed to NASA in this proposal, the proposing PI must notify the NASA Program Officer identified for the Announcement immediately of any successful proposals that are awarded anytime after the Proposal Due Date and until the time that NASA's selections are announced.

- **Facilities and Equipment**

This section should describe any facilities (including any owned by the U.S. Government) and/or test or experiment equipment valued over \$5,000 that are critical for carrying out the proposed project, whether it is already available or would need to be purchased. Before requesting an item of capital equipment, the proposer should determine if sharing or loan of equipment already within the organization is a feasible alternative and, if not, why such arrangements cannot be made. The need for general-purpose items that typically can be used for research and non-research purposes should be explained. Proposed costs for purchased facilities, tooling, or equipment must be entered in the proposal Budget Summary and described in the Budget Details (reference Appendix G).

- **Statement(s) of Commitment**

Every Co-Investigator, Collaborator, etc. identified as a participant in the proposal's Technical/Management Section must submit a brief, signed statement of commitment that acknowledges his/her intended participation in the proposed effort. In the case of more than one Co-I

or Collaborator, a single statement signed by all participants may be submitted. In any case, each statement must be addressed to the PI, may be a facsimile of an original statement or the copy of an e-mail (the latter must have sufficient information to unambiguously identify the sender), and is required even if the Co-I or Collaborator is from the PI organization. An example of such a statement follows: "I(we) acknowledge that I(we) am(are) identified by name as Co-Investigator(s) [and/or Collaborator(s)] to the investigation, entitled <name of proposal>, that is submitted by <name of Principal Investigator> to the NASA Announcement <alpha-numeric identifier>, and that I(we) intend to carry out all responsibilities identified for me(us) in this proposal. I(we) understand that the extent and justification of my (our) participation as stated in this proposal will be considered during peer review in determining in part the merits of this proposal."

(d) Proposal Funding Restrictions

Section II, paragraph (c), Number and Value of Awards, of this Announcement provides an estimate of the funds expected to be available for competition through this Announcement as well as the approximate number of awards these funds are expected to support. In addition, Appendix G, Budget Narrative, contains detailed restrictions applicable to proposed costs under this Announcement. For further information on the eligibility of costs, refer to the cost principles cited in the *Handbook*, Section 1260.127.

Regardless of whether functioning as a team lead or as a team member, personnel from NASA Centers must propose budgets based on Full Cost Accounting (FCA). Non-NASA U.S. Government organizations should propose based on FCA unless no such standards are in effect; in that case such proposers should follow the Managerial Cost Accounting Standards for the Federal Government as recommended by the Federal Accounting Standards Advisory Board (for further information, see <http://www.hq.nasa.gov/fullcost/>).

V. PROPOSAL REVIEW INFORMATION

(a) Evaluation Criteria

NASA Education Representative will review the proposals. Evaluation of each proposal will be used to assess intrinsic scientific and technical merit, relevance to NASA's stated objectives, and cost realism and reasonableness. The following sections represent the weighted categories for the solicitation:

Project Objectives (35%)

- Define a specific educational need or problem manifested in NES.

- Propose a credible solution that pertains to one or more of the three elements outlined in Section I, Paragraph (e) of this Announcement: professional development, instructional materials or innovative learning technologies.
- Identify realistic, measurable outcomes that you expect to result from carrying out the project that will have an impact on education as only NASA can.
- Address accessibility for learners with special needs, if applicable.

Project Feasibility (35%)

- Discuss the proposed approach and the rationale for this particular educational experience with emphasis on how the various components will be organized, and work together.
- Outline applicant qualifications and evidence that the applicant team has the ability to deal effectively with the technical complexity, educational pedagogy, and the organizational challenges associated with managing the project.
- Present an implementation schedule that identifies major project tasks and milestones.
- Outline plans for protecting the privacy, confidentiality, and accessibility of the end users and beneficiaries of the project.
- Present a credible budget plan that includes a discussion of anticipated ongoing expenses and potential sources of funds to initially support and then to sustain the project.
- Identify potential risks of the proposed program and discuss how you will mitigate these risks.

Performance Metrics (20%)

- Present clearly defined metrics to evaluate the degree to which the project achieves project outcomes including infusion into NES and a successful professional development experience for NES teachers, or a successful learning experience for students in NES.
- Validate and verify performance goals and outcomes used as the basics of your overall design, methodology, and intent.
- Past Performance Findings.

Relevance (10%)

- Describe, in detail, aspects of the project that are specifically relevant to NES.

- Place efforts in a national context by comparing and contrasting the project to other efforts or projects in the field.

(b) Evaluation and Selection Process

(i) Evaluation Approach

Proposals will be evaluated based upon how successfully each proposal reflects NASA's vision, mission and priorities for education. The proposed approach must clearly state the direct relationships to NASA's education priorities to provide educators with unique teaching tools and compelling teaching experiences and/or to engage minority or underrepresented students and educators in NASA's education program. The primary components of the proposal review process are as follows:

- a) A multi-member review panel will be appointed to evaluate proposals and make recommendations through a merit process.
- b) Selected panelists will be those without a conflict of interest with proposals under review.
- c) The review panel will rank proposals based on the evaluation criteria detailed in paragraph V. (a), above.
- d) Each proposal will be ranked based on the evaluation criteria cited above and the adjectival rating scale provided below. Each proposal will be assigned a total score between 0 and 100 points.
- e) The NES Program Manager, through the agreement officer, may renegotiate proposal requirements and fiscal funding levels as necessary.

NASA will likely accept proposals without discussion; hence, initial submissions of proposals should be as complete as possible and should reflect the offeror's most favorable terms.

(ii) Proposal Ranking

The peer reviewers will use the following adjectival ratings to rank individual proposals.

<u>ADJECTIVAL RATING</u>	<u>DEFINITIONS</u>
Excellent	A comprehensive and thorough proposal of exceptional merit with one or more significant strengths. No deficiency or significant weakness exists.
Very Good	A proposal having no deficiency and which demonstrates over-all competence. One or more significant strengths have been found, and strengths outbalance any weaknesses that exist.
Good	A proposal having no deficiency and which shows a reasonably sound response. There may be strengths or weaknesses, or both. As a whole, weaknesses not offset by strengths do not significantly detract from the offeror's response.
Fair	A proposal having no deficiency and which has one or more weaknesses. Weaknesses outbalance any strengths.
Poor	A proposal that has one or more deficiencies or significant weaknesses that demonstrate a lack of overall competence or would require a major proposal revision to correct.

The NES Program Manager will examine the review Panel's highest-ranking proposals for funding consideration.

The following considerations will be taken into account by the NES Program Manager when determining which proposals to fund (considering programmatic factors such as balance between objectives or disciplines). Please note that the position of a selection factor within this list does not indicate relative significance.

- The evaluations of the Review Panel.
- The recommendations of the NES Program Manager.
- The degree to which the proposal meets the requirements of this Announcement.
- The availability of funds.

The Selection Official for this Announcement will be the NASA Explorer Schools program manager.

(c) Selection Announcement and Award Dates

It is the stated metric goal for NASA that selection will be announced within 150 days of the proposal due date. After 150 days past the proposal due date, offerors may contact the NES Program Manager (see Section VII below) for updated information regarding the timing of awards for this Announcement.

When a proposal is not selected for award, the offeror will be notified by mail and will be provided with a debriefing consistent with the policy stated in Section C.6 of the *NASA Guidebook for Proposers*.

When a proposal is selected for award, negotiation and award will be handled by the Headquarters Procurement Office at Goddard Space Flight Center (Code 210.H). The proposal is used as the basis for negotiation. The agreement officer may request certain business data and may forward an award instrument and other information pertinent to negotiation.

(d) Cancellation of Announcement

NASA reserves the right to make no awards under this Announcement and to cancel this Announcement. NASA assumes no liability (including bid and proposal costs in case of cancellation) for canceling the Announcement or for anyone's failure to receive actual notice of cancellation.

VI. AWARD ADMINISTRATION INFORMATION

(a) Notice of Award

Awards made through this Announcement will be administered in accordance with the general policies given in Appendix D of the *NASA Guidebook for Proposers*. In case of any conflict, this Announcement takes precedence. The type of award to be offered to selected offerors will generally follow the policies in Section D.1 of the *NASA Guidebook for Proposers*.

Both the selected as well as nonselected proposers will be notified consistent with the policy given in Section C.5.1 of the *NASA Guidebook for Proposers*. For selected proposers, a NASA Awards Officer, who is the only official authorized to obligate the Government, will contact the offeror's business office. Any costs incurred by the offeror in anticipation of an award are the offeror's risk.

(b) Administrative and National Policy Requirements

This solicitation does not invoke any special administrative or National policy requirements, nor do the awards that will be made involve any special terms and conditions that differ from NASA's general terms and conditions as given in the *Handbook*. However, there are two formal Certifications and one formal Assurance required as part of a proposal submitted in response to this Announcement (reference Appendix C).

(c) Award Reporting Requirements

The reporting requirement for awards made through this Announcement will be consistent with Exhibit G of the *Handbook* (reference <http://ec.msfc.nasa.gov/hq/exhibitg.doc>).

VII. POINTS OF CONTACT FOR FURTHER INFORMATION

General questions and comments about the content or policies of this Announcement may be directed to:

Ms. Peg Steffen
NASA Explorer School Program Manager
Code N, Office of Education
National Aeronautics and Space Administration
Washington, DC 20546
Telephone: (202) 358-0516
E-mail: psteffen@nasa.gov

Inquiries about accessing or using the NASA database located at <http://proposals.hq.nasa.gov> should be directed by an E-mail that includes a telephone number to <proposals@hq.nasa.gov> or by calling (202) 479-9376. This help center is staffed Monday through Friday, 8:00 am - 4:30 pm Eastern Time.

VIII. ANCILLARY INFORMATION

(a) Related NASA Programs

Programs that presently support NES provide examples of educator professional development, student investigative opportunities, and family involvement strategies that are key to the success of NES.

Student Observation Network - The Student Observation Network is a growing collection of inquiry-based education modules that provide research-based instruction incorporating cognitively challenging activities to engage students in learning through critical and creative thinking.

WebWatchers - Assist educators in learning how to better search, evaluate, aggregate and integrate web resources into their classroom that are aligned to the national science education standards district science education topics of interest. Using online web-based WebWatcher tools, educators apply a series of online rubrics across educational areas like inquiry, "how scientists learn", resource integration, interactivity, etc., that allow them to assess the utility of a particular web page (or series of pages) for its educational appropriateness.

Handheld Technology - Using NASA CONNECT™, a well-established instructional television series designed to integrate science and mathematics instruction at the middle school level, this project involved the use of handheld computers as part of a selected classroom activity featured in the program.

NLIST - Network for Leadership Inquiry and Systemic Thinking has produced internet products for more effective science education program implementation. The project defined "Science as Inquiry" and developed rubrics and procedures for the alignment of instruction resources and teaching strategies.

(b) Electronic Notification of Solicitation Amendments

An electronic notification system has been established to alert interested offerors of updates to this Announcement. Subscription to this service is free and is accomplished through the menu item (See Appendix A).

(c) Proprietary Information

Proposals received in response to this Announcement will be used only for evaluation purposes. NASA does not allow a proposal, the contents of which are not available without restriction from another source, or any unique ideas submitted in response to an Announcement to be used as the basis of a solicitation or in negotiation with other organizations, nor is a pre-award synopsis published for individual proposals.

A solicited proposal that results in a NASA award becomes part of the record of that transaction and may be available to the public on specific request; however, information or material that NASA and the recipient mutually agree to be of a privileged nature will be held in confidence to the extent permitted by law, including the Freedom of Information Act.

(d) Accessibility and Usability Guidelines

NASA shall ensure that employees with disabilities have access to and use of information and data that is comparable to information and data available for other employees or members of public without disabilities. The proposal shall address how electronic and information technology accessibility will be met. For additional information regarding the Architectural and Transportation Barriers Compliance Board (Access Board) policies, the following resources are provided:

Accessibility Guidelines - <http://section508.nasa.gov>

Usability Guidelines - <http://www.usability.gov>

(e) Lack of Encumbrance on Dissemination

The project deliverables shall not be encumbered by licensing restrictions unacceptable to NES Program Office. They shall allow public dissemination of object code, data, imagery and electronic models without payment of royalties, other fees, or "share-back" requirements, including those imposed by use of independently developed free or purchased software, hardware, or data.

All source forms of code, data, electronic imagery and models created or caused to be created (i.e., "contracted" or "out-sourced") by the project shall be unencumbered for public dissemination.

Appendix A

Instructions for Notice of Intent to Propose

Notice of Intent

A Notice of Intent (NOI) to submit a proposal in response to this Announcement is required. NOI's are to be submitted electronically by entering the requested information through the SYS-EYFUS Web site located at: <http://proposals.hq.nasa.gov/proposal.cfm> .

User Identifications (User ID)

- User IDs and passwords are required by NASA security policies in order to access the SYS-EYFUS Web site. Prospective PI's can check if they have a SYS-EYFUS User ID and Password by going to <http://proposals.hq.nasa.gov/proposal.cfm> and performing the following steps:
- Click the hyperlink for NEW USER; this will take the user to the personal information Search Page.
- Enter the user's first and last name. SYS-EYFUS will search for matching record information in the SYS-EYFUS database.
 - If matches are found, select the "correct" record from those displayed and then click on CONTINUE.
 - If no exact match is found, select NONE OF THE ABOVE click on CONTINUE. Then complete the NEW USER form. Follow the on-line instructions for updating and/or entering new data. In addition, to adding general contact information, areas of interest and expertise are required.
 - If no match is found, select ADD RECORD. Follow the on-line instructions for updating and/or entering new data. In addition, to adding general contact information, areas of interest and expertise are required.
- A User ID and password will be emailed to you.

With the user ID and password, login to the SYS-EYFUS web site and follow the instructions for NEW NOTICE OF INTENT.

As a minimum, the following information will be requested:

- Announcement number, alpha-numeric identifier, (Note: this is included on the Web-site template);
- The Principal Investigator's name, mailing address, phone number, and email address;
- The name(s) of any Co-Investigator(s) and institution(s) known by the NOI due date (Note: in order to enter such names, the team members must have previously accessed and registered in this NASA data system themselves; a Principal Investigator cannot do this for them);
- Scope of Effort: Professional Development, Instructional Materials, and/or Technology Tools.
- A Short Title of the anticipated proposal (50 characters or less);

- A Full Title of the anticipated proposal;
- A Short Title of the anticipated proposal (50 characters or less) (Note: the information in this item does not constrain in any way the Proposal Summary that must be submitted with the final proposal); and
- A brief (200-300 word) description of the investigation to be proposed.

After completing the indicated fields the NOI, is then electronically submitted (Note: a copy may be printed for reference).

APPENDIX B

SAMPLE PROPOSAL COVER PAGE



(Date : mmm dd, yyyy)

XXX-XXXX-XXXX

Name of Submitting Institution:

Congressional District:

Certification of Compliance with Applicable Executive Orders and U.S. Code

By submitting the proposal identified in this Cover Sheet/Proposal Summary in response to this Research Announcement, the Authorizing Official of the proposing institution (or the individual proposer if there is no proposing institution) as identified below:

- certifies that the statements made in this proposal are true and complete to the best of his/her knowledge;
- agrees to accept the obligations to comply with NASA award terms and conditions if an award is made as a result of this proposal; and
- confirms compliance with all provisions, rules, and stipulations set forth in the two Certifications contained in this Announcement [namely, (i) Assurance of Compliance with the NASA Regulations Pursuant to Nondiscrimination in Federally Assisted Programs, and (ii) Certifications, Disclosures, And Assurances Regarding Lobbying and Debarment & Suspension]. Willful provision of false information in this proposal and/or its supporting documents, or in reports required under an ensuing award, is a criminal offense (U.S. Code, Title 18, Section 1001).

NASA PROCEDURE FOR HANDLING PROPOSALS

This proposal shall be used and disclosed for evaluation purposes only, and a copy of this Government notice shall be applied to any reproduction or abstract thereof. Any authorized restrictive notices that the submitter places on this proposal shall also be strictly complied with. Disclosure of this proposal for any reason outside the Government evaluation purposes shall be made only to the extent authorized by the Government.

[1] ... PI Information

Name:	Email:
Organization:	
City, State, Zip:	Country:

PI Signature and Date:

Authorizing Official:	Email:
Title:	Phone:
Institution:	
Address:	

AO Signature and Date:

[2] ... Co-Investigator

Name:	Email:
Organization:	
City, State, Zip:	Country:

2] ... Co-Investigator

Name:	Email:
Organization:	
City, State, Zip:	Country:

[3] ... Proposal Title (Short and/or Full)

Short Title:	
Full Title:	

[4] ... Summary

200-300 word abstract

[5] ...Cage Code, Duns, TIN

Cage Code:	
DUNS Number	
TIN Number:	

[6]...Proposed Start Date: _____
Proposed End Date: _____

[7]...Organization Type:_____

[8]...International Participants (Yes/No)

[9]...Government Participant (Yes/No)

[10] ... Budget

Type	Year 1	Year 2	Total
(d) Direct Labor			
Other Direct Costs - Subcontracts			
- Consultants			
- Equipment			
- Supplies			
- Travel			
- Other			
Indirect Costs			
Other Applicable Costs			
Subtotal - Estimated Costs:			
Less: Proposed Cost Sharing - Cost Sharing:			
Budget Total			

Instructions for Completing the Proposal Cover Page

System Access Instructions

If you do not have a SYS-EYFUS UserID or password or you have forgotten your User ID or Password, you may obtain one electronically by going to <http://proposals.hq.nasa.gov> and performing the following steps:

- Click the hyperlink for **new user**, which will take you to the Personal Information Search Page.
- Enter your first and last name. SYS-EYFUS will **search** for your record information in the SYS-EYFUS database.
- Confirm your personal information by **choosing** the record displayed or begin the registration process. The system will guide you through the steps to obtain your UserID and password.
- Select **continue**, and a User ID and password will be e-mailed to you.
- Once you receive your User ID and Password, **login** to the SYS-EYFUS Web site and follow the instructions for **New Notice of Intent**. To submit a **Proposal Cover Page**, sign back into the system using your UserID and password and choose **New Proposal Cover Page**. Select the Notice of Intent previously submitted and the system will ask for additional information to complete the cover page.
- To print the Proposal Cover Page, follow the instructions provided after all proposal information has been submitted.

Respondents without access to the Web or who experience difficulty in using this site may contact the Help Desk at proposals@hq.nasa.gov (or call 202.479.9376) for assistance. After you have submitted your NOI or proposal cover page electronically, if you are unsure if it has been successfully submitted, do not re-submit. Please call the Help Desk. They will be able to promptly tell you if your submission has been received. Please note that submission of the electronic cover page does **not** satisfy the deadline for proposal submission. Systemic questions regarding SYS-EYFUS can also be answered by Althia Harris at NASA Peer Review Services. The contact number is (202) 479-9030 (ext 310) or by email at aharris@nasaprs.com.

Field Definitions

The following information is provided to assist proposers with completing the Proposal Cover Page. Note that all of this information is needed in order for NASA to complete a financial award with the proposing organization should the proposal be selected for funding; therefore, it is extremely important that it be provided accurately and completely.

- **PI Information.** Provide the name and full mailing address of the Principal Investigator, including his/her specific Division or Mail Stop as appropriate, and E-mail address, telephone number, and facsimile (Fax) number (Note: once the PI enters his/her name, this information will be provided automatically from the data base using the information previously submitted when registering as a user in this system). The printed version of this form includes a space for the PI's signature.
- **Authorizing Official.** Provide the name and title of the Authorizing Official of the proposing organization, and the full mailing address for the office that functions as proposing

organization's Office of Sponsored Research. The printed version of the form includes a space for that Official's signature.

- **Proposal Title:** Provide both a Short Title (limit of 50 characters), as well as a Full Title of the proposed investigation, which may be of any length or the same as the Short Title so long as it is intelligible to a scientifically literate reader and suitable for use in the public press.
- **Taxpayer Identification Number (TIN).** Every U.S. organization (or Unaffiliated Individual) that submits a proposal to a U.S. agency must provide their permanently-assigned TIN in compliance with 31 U.S. Code 7702(c)(1).
- **Dun & Bradstreet (D&B), Data Universal Numbering System (DUNS).** Every organization (or Unaffiliated Individual) that submits a proposal to a U.S. agency must obtain a permanently assigned DUNS number from D&B. Organizations will use the same DUNS number with every proposal submitted for a Federal grant or cooperative agreement so that this registration need only be done one time. Note that the DUNS number is site-specific. NASA requires that this DUNS number be submitted with the proposal cover page. Potential applicants may call D&B at 1-866-705-5711 to register and obtain a DUNS number. The process to request a DUNS number takes about 10 minutes by phone and is free of charge. Potential applicants may also register for their DUNS number at D&B Website: <https://eupdate.dnb.com/requestoptions.html>. This process takes about 14 days.

Click on the link that reads, "Request a D&B D-U-N-S Number" In the middle of the screen to access the free registration page. Information needed to attain a DUNS Number:

Legal Name

Tradestyle, doing business as (dba), or other name in which your entity is commonly recognized

Physical Address, City, State and Zip Code

Mailing Address (if separate)

Telephone Number

Contact Name

SIC Code (Line of Business)

Number of Employees at your location

Headquarters name and address (Reporting relationship within your entity)

- **Commercial and Government Entity (CAGE) Code.** The Cover Page also requires a Commercial and Government Entity (CAGE) code that the applicant's organization obtains by registering in the Central Contractor Registration (CCR) database. This requirement centralizes information about grant recipients to change organizational information.

Information for registering in the CCR and online documents can be found at <http://www.ccr.gov>. Before registering, applicants and recipients should review the Central Contractor Registration Handbook that is also located at the same site. The process for obtaining a CAGE code is incorporated into the CCR registration.

- **Team Members.** A table is provided for listing all supporting Proposal Personnel by the Role they are expected to play in the proposal. Include their Names, Organizations, E-mail Addresses, and Telephone numbers (Note: these individuals must each register him/herself in this NASA data base in order to be listed in this section; the proposing PI may not register someone as a Team Member).
- **Proposed Start/End Dates.** Provide the start and end dates of the period of performance of the proposal (Note: the Start Date should be at least 200 days after the Proposal Due Date unless otherwise specified in the Announcement).
- **Summary of Proposal.** Using ~2500 characters, including spaces, or less (about half a page using the standard style formats for proposal text) provide the following key information:
 - A description of the key, central objectives of the proposal in terms understandable to a non-specialist;
 - A concise statement of the methods/techniques proposed to accomplish the stated objectives; and
 - A statement of the perceived significance of the proposed work to the objectives of the Announcement and to NASA interests and programs in general. (Note: NASA intends to publish the proposal's full title, the PI's name and organization, and the Proposal Summary of every selected investigation in a publicly accessible data base; therefore, the Proposal Summary should not include proprietary information that would preclude its unrestricted release.
- **Organization Type**, using one of the listed categories.
 - **Educational Organization:** A university or two- and four-year college (including U.S. community colleges) accredited to confer degrees beyond that of the K-12 grade levels (all such organizations are considered nonprofit).
 - **Not for Profit, Non-academic Organization:** A private or Government supported research laboratory, university consortium, museum, observatory, professional society, educational organization, or similar organizations that directly supports advanced research activities but whose principal charter is not for the training of students for academic degrees.
 - **Commercial Organization:** An organization of any size that operates for profit or fee and that has appropriate capabilities, facilities, and interests to conduct the proposed effort.
 - **NASA Center:** Any NASA Field Center and the Jet Propulsion Laboratory. Other Federal Agency – Any non-NASA, U.S. Federal Executive agency or Federally Funded Research and Development Center (FFRDC) sponsored by a Federal agency.
 - **Unaffiliated Individual:** Any person residing in the U.S., regardless of being a U.S. citizen or resident alien, who has the capabilities and access to facilities for carrying out the proposed project and who, if selected, agrees to financial arrangements that NASA determines as sufficient to ensure the responsible management of appropriated Federal funds.

- **Non-U.S. Organizations:** Organizations outside the U.S. that propose on the basis of a policy of no-exchange-of-funds. (Note: some Announcements may be issued jointly with a non-U.S. organization, e.g., those concerning guest observing programs for jointly sponsored space science programs that will contain additional special guidelines for non-U.S. participants).
- **International Participation:** a **Yes/No** designation of whether the proposal involves participation by any personnel employed by a non-U.S. organization (Note: if such personnel are involved, signed letters of support from their sponsoring organizations or agencies are required)
- **U.S. Government Agency Participation:** a **Yes/No** designation of whether the proposal involves participation by any personnel employed by any agency of the U.S. Government, including any of NASA's Centers and the Jet Propulsion Laboratory. If the answer is "Yes," provide the participant's name, role, Government agency affiliation, and total dollar amount requested (if any) for their participation in the proposal. Note that all costs for this participation must also be shown in the Budget Summary (see below), as well as be supported by appropriate details in the proposal's Budget Details
- **Budget Summary:** Fill in the tables as presented, which requires the total amounts for each of the following items for each year of the proposed period of performance, as well as for the total proposed effort, as supported by the Budget Details portion of the proposal. More detailed instructions are listed in Appendix B of this Announcement.

APPENDIX C

REPRESENTATIONS, CERTIFICATIONS, AND OTHER STATEMENTS OF OFFERORS

1. ASSURANCE OF COMPLIANCE WITH THE NASA REGULATIONS PURSUANT TO NONDISCRIMINATION IN FEDERALLY ASSISTED PROGRAMS

The (*Institution, corporation, firm, or other organization on whose behalf this assurance is signed, hereinafter called "Applicant "*) hereby agrees that it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (20 U.S.C. 1680 et seq.), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and the Age Discrimination Act of 1975 (42 U.S.C. 16101 et seq.), and all requirements imposed by or pursuant to the Regulation of the National Aeronautics and Space Administration (14 CFR Part 1250) (hereinafter called "NASA") issued pursuant to these laws, to the end that in accordance with these laws and regulations, no person in the United States shall, on the basis of race, color, national origin, sex, handicapped condition, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives federal financial assistance from NASA; and hereby give assurance that it will immediately take any measure necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to the Applicant by NASA, this assurance shall obligate the Applicant, or in the case of any transfer of such property, any transferee, for the period during which the real property or structure is used for a purpose for which the federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant for the period during which the federal financial assistance is extended to it by NASA.

This assurance is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contracts, property, discounts, or other federal financial assistance extended after the date hereof to the Applicant by NASA, including installment payments after such date on account of applications for federal financial assistance which were approved before such date. The Applicant recognizes and agrees that such federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear on the Proposal Cover Sheet above are authorized to sign on behalf of the Applicant.

2. CERTIFICATIONS, DISCLOSURES, AND ASSURANCES REGARDING LOBBYING AND DEBARMENT & SUSPENSION

1. LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 14 CFR Part 1271, as defined at 14 CFR Subparts 1271.110 and 1260.117, with each submission that initiates agency consideration of such applicant for award of a Federal contract, grant, or cooperative agreement exceeding \$ 100,000, the applicant must **certify** that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal

loan, the continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit a Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

3. GOVERNMENTWIDE DEBARMENT AND SUSPENSION

As required by Executive Order 12549, and implemented at 14 CFR 1260.510, for prospective participants in primary covered transactions, as defined at 14 CFR Subparts 1265.510 and 1260.117—

(1) The prospective primary participant **certifies** to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Appendix D

Proposal Checklist

Proposal Content	Page Guideline	Section and Appendix References
<p>1. PROPOSAL COVER PAGE</p> <ul style="list-style-type: none"> ▪ PI Contact Information and Signature: The Program Manager or PI must sign the original. Please include the contact information for the PM ▪ Authorizing Official Contact Information and Signature: The proposal cover sheet shall be signed by an institutional official who is authorized to certify institutional support and sponsorship of the investigation and of the management of the proposal. (The electronic proposal submission process located at http://proposals.hq.nasa.gov/proposal.cfm/ generates this form). ▪ Team Members and other Key Personnel: Please include any Teaming partners or Other Key Personnel on the cover sheet. Signatures are not necessary. Individuals must each register him/herself in this NASA database in order to be listed in this section; the proposing PI may not register someone as a Team Member. ▪ Proposal Abstract (200-300 words). Include a description of the project's objectives, number of participants in the project, method of approach, and the measurable outcomes. A sample electronic Proposal Abstract page is included in Appendix A. ▪ Full and Short Titles: Please enter a long and short title. This will help during proposal peer reviews. ▪ Proposed Cost: The budget section of the electronic proposal cover page should include a budget breakdown for each year of the proposed work (2 years). The electronic form will provide a total summary for the entire period of the proposal. See Budget Guidelines in Appendix B. ▪ TIN, DUNS, and CAGE Numbers ▪ Other Information will be requested. Please fill out all information as leaving sections blank will be an indication of non-compliance with the solicitation. <p>The length of the electronic proposal cover page (as generated via SYS-EYFUS) may vary depending upon the length of the proposal abstract/summary. <u>However, the total cover-page packet, including the summary and budget figures, will count as only 1 page total.</u> A sample cover page packet is included in Appendix A.</p> <p>To print the Proposal Cover Page, select "View" and then use the "Print" Button on your Internet browser menu. Make sure your printed copy includes the Abstract and the breakdown of Budget Categories. Submit this Proposal Cover Page with your proposal hard copy.</p>	1	Appendix B
2. Table of Contents	1	Section IV, Paragraph (c) (iv)

Proposal Content	Page Guideline	Section and Appendix References
3. Summary of Proposal Personnel and Work Effort:	2	Section IV, Paragraph (c) (iv)
4. Technical / Management Plan	Up to 10	
5. References and Citations	2	
6. Personnel Resumes	2(PI) 1(Other)	
7. Past Performance	2	Appendix F
8. Budget Explanation / Plan	4	Appendix G
9. Current and Pending Support	1 (each participant)	
10. Facilities and Equipment	1	
11. Signed Statements of Commitment	Does not count against total	
12. Certification of Principal Investigator Eligibility Form (Required)	Does not count against total	Appendix E
13. Certifications Regarding Lobbying, Debarment, Suspension and Other Responsibility Matters and Drug-Free Workplace Requirements Form. (This form <u>does not have to be submitted</u> with the proposal. The authorizing institutional signature on the Proposal Cover Page certifies that the proposing institution has read and is in compliance with these certifications. Copies are included in the solicitation in Appendix D)		

Appendix E

Principal Investigator Eligibility Certification

COMPLETION OF THIS FORM IS REQUIRED

1. Last Name First Name MI

2. Verification of Employment:

Employed by (institution):

School/Department (specify):

Check type of position

☐ Tenured ☐ Tenured-track ☐ Full Time Contractual

II. Previous NASA Funding

List all NASA awards, NASA contracts, NASA consulting from which the proposed PI received funding as PI during the past 5 years, including active awards.

Column A	Column B	Column C	Column D	Column E
Award	PI or CO-I	Title of Award	Period (from - to)	Amount
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			/ / to / /	
			TOTAL FUNDING:	

Instructions:

Column A: Identify whether award was a research grant (R), education grant (E), contract (C), or consulting agreement (A).

Column B: For each award indicate whether applicant was a PI or CO-I.

Column C: List title of award.

Column D: List the period of performance.

Column E: List amount of award. For awards on which the proposed PI was a CO-I, show only that portion of the award, which supported the proposed PI's personal research, and attach an explanation of how this was determined. For awards on which the proposed PI was the PI, show the total award amount.

Certification Authority

The person authorized to sign below certifies that the information provided is accurate.

Authorized Institutional Official (typed): _____

Title: _____

Signature: _____

APPENDIX F

PRESENT/PAST PERFORMANCE QUESTIONNAIRE

NASA Headquarters has released a NASA Research Announcement (NRA) to provide support to the Workshops and Student Symposia that are necessary to carry out the NASA Explorer School mission. As this is a NASA wide initiative, it will be necessary to work closely with the NASA Centers to ensure that the workshops are planned and facilitated seamlessly.

As part of NASA's evaluation process for past performance NASA requests that proposing parties provide a reference for the request of their customers to complete a questionnaire to help NASA assess the Offeror's experience and relevancy of work performed as compared to our requirement

This entity may be contacted during the review and solicitation process for past performance feedback

Past Performance "FACTS Sheet"

Past Performance Involvement (name of organization submitting proposal to NRA)

Company:					
Division:					
Agreement No.					
Dollar Value:	\$				
Work:	Complete <input type="checkbox"/>	Ongoing <input type="checkbox"/>			
Award date:					
Description of Support:					
Target Cost:	On <input type="checkbox"/>	Above <input type="checkbox"/>	Below <input type="checkbox"/>	By:	%
Schedule:	On <input type="checkbox"/>	Ahead <input type="checkbox"/>	Behind <input type="checkbox"/>	By:	Months
Point of Contact:					
E-Mail Address:					
Telephone Number:					

(This Past Performance "FACTS Sheet" may be duplicated for additional references)

Appendix G

Budget Narrative

The following budget submission shall be provided with offers:

Type		Year 1	Year 2	Total
Direct Labor				
Other Direct Costs	Subcontracts			
-	Consultants			
-	Equipment			
-	Supplies			
-	Travel			
-	Other			
Indirect Costs				
Other Applicable Costs				
Subtotal – Estimated Costs:				
Less: Proposed Cost Sharing – Cost Sharing:				
Budget Total				

1. Direct Labor (salaries, wages, and fringe benefits): Attachments should list number and titles of personnel, amount of time to be devoted to the project, and hourly salary rates.
2. Other Direct Costs:
 - (i) Subcontracts: Attachments should describe the work to be subcontracted, estimated amount, recipient (if known), and the reason for subcontracting. Additionally, describe the terms and conditions of the subcontract, how the price/cost was determined fair and reasonable, and details of competition resulting in the subcontract. Include copies of quotations and/or commercial price lists as applicable.
 - (ii) Consultants: Identify consultants to be used (name, address, phone), why they are necessary, the time they will spend on the project, and rates of pay. Describe the terms and conditions of the consultant relationship with the offeror, how the price/cost of consultant services was determined fair and reasonable, and any details of competition resulting in the consultant selection.
 - (iii) Equipment: Offerors attention is directed to 1260.27 and 1274.923 entitled, "Equipment and Other Property." Offerors shall list separately any item it intends to purchase under this grant or cooperative agreement. Explain the need for items costing more than \$5,000. Describe basis for estimated cost. General-purpose equipment is not allowable as a direct cost unless specifically approved by the agreement officer. Any equipment purchase requested to be made as a direct charge under this grant or cooperative agreement must include the equipment description, how it will be used in the conduct of the effort proposed and why it cannot be purchased with indirect funds. Describe the terms and conditions of the purchase of equipment, how the price/cost was determined fair and reasonable, and details of competition resulting in the equipment purchase.
 - (iv) Supplies: Provide general categories of needed supplies, the method of acquisition, estimated cost. Additionally, provide the details of the competition performed for the purchase of the needed supplies.
 - (v) Travel: Describe the purpose of the proposed travel in relation to the grant or agreement and provide the basis of estimate, including information on destination, number of travelers (where known), per diem rate, and all other estimated costs associated with proposed travel.

- (vi) **Other:** Enter the total of direct costs not covered by 2a through 2e. Attach an itemized list explaining the need for each item and the basis for the estimate. Enter the student stipends (number of students x amount of stipend for each).
3. **Indirect Costs:** Identify indirect cost rate(s) and base(s) as approved by the cognizant Federal agency, including the effective period of the rate. Provide the name, address, telephone number and email address, if known, of the Federal agency and official having cognizance. If unapproved rates are used, explain why, and include the computational basis for the indirect expense pool and corresponding allocation base for each rate. If rates are based upon a forward pricing rate agreement, provide a copy of the agreement with the budget proposal.
 4. **Other Applicable Costs:** Enter total of other applicable costs with an itemized list explaining the need for each item and basis for the estimate.
 5. **Subtotal-Estimated Costs:** Enter the sum of items 1 through 4.
 6. **Less Proposed Cost Sharing (if any):** Enter any amount proposed. If cost sharing is based on specific cost items, identify each item and amount in an attachment.
 7. **Carryover Funds (if any):** Enter the dollar amount of any funds that are expected to be available for carryover from the prior budget period. Identify how the funds will be used if they are not used to reduce the budget.
 8. **Total Estimated Costs:** Enter the total after subtracting items 6 and 7b from item 5.

Special Budget Considerations:

In complying with the requirements of the Budget Summary and for providing adequate additional information to understand its entries, the following additional important NASA procurement policies apply:

i) Purchase of Personal Computers and/or Software. Note the discussion of item "2.c. Equipment" on the Instructions above regarding the proposed purchase of personal computers and/or commercial software. Such items are usually considered by NASA to be general-purpose equipment that must be purchased from general organizational overhead budgets and not directly from the proposal budget unless it can be demonstrated that such items are to be used uniquely and only for the proposed research. If a proposal is selected for award, failure to adequately address the provisions of the instructions for item 2.c will require that NASA contact the proposing organization for the required information. Such activity may delay the award until the purchase is justified as a direct charge for general-purpose equipment to be used exclusively for research activities.

(ii) Joint Proposals Involving a Mix of U.S. Government and Non-Government Organizations.

- (a) If a PI from any type of private or public organization proposes to team with a Co-I from and/or use a facility at a U.S. Government organization (including NASA Centers and the Jet Propulsion Laboratory), then any required budget for that Government Co-I and/or facility should be included in the proposal's Budget Details and should be listed as "Other Applicable Costs" in the required Budget Summary. If the proposal is selected, NASA will execute an inter- or intra-Agency transfer of funds, as appropriate, to cover the applicable costs at that Government organization.
- (b) If a PI from a U.S. Government organization (including NASA Centers and the Jet Propulsion Laboratory) proposes to team with a Co-I from a non-Government organization, then the proposing Government organization must cover those Co-I costs through an appropriate award for which that

Government PI organization is responsible. Such non-Government Co-I costs should be entered as a "Subcontract" on the Budget Summary.

(iii) Responsibility of the Proposing Organization to Place Subawards for Co-I's at Other Organizations. Other than the special cases discussed in item (ii) above, and unless specifically noted otherwise in the AGREEMENT NOTICE, the proposing PI organization must subcontract the funding of all proposed Co-I's who reside at other non-Government organizations, even though this may result in a higher proposal cost because of subcontracting fees.

(iv) Full-Cost Accounting at NASA Centers. NASA is now operating using full cost budgeting, accounting, and management practices. As such, all research proposals should be submitted with fully loaded costs including procurement, civil service labor, travel, service pools, center G&A, and corporate G&A. NASA researchers answering Agreement Notices should comply with the full cost policies. Non-NASA researchers answering Agreement Notices should work with the NASA sponsoring organization to ensure all direct and institutional (NASA facilities and civil service labor) are adequately accounted for. The web address for NASA's Full Cost Initiative is:
<http://www.hq.nasa.gov/fullcost>.

(v) Unallowable Costs. The Office of Management and Budget (OMB) Circulars A-21 and A-122, and the Federal Acquisition Regulation (FAR) at 48 CFR Part 31, identify certain costs that may not be included in a proposed budget. The use of appropriated funds for such purposes are unallowable and may lead to cancellation of the award and possible criminal charges. Grant recipients should be aware of cost principles applicable to their organization as set forth in the above regulations.